

Recommendations for centrifuging glass blood collection tubes

Provided by Streck Technical Services

To reduce the risk of glass tube breakage during centrifugation, each lab should refer to their individual centrifuge manual for specifications, applicable accessories and recommendations for each tube type and size that will be used.

Consider the following points when using a glass Streck Blood Collection Tube (BCT):

- Use a swing bucket centrifuge.
- Centrifuge wells and tube adapters should support the entire tube to minimize stress points along the length of the tube. Some centrifuges may require specific adapters for longer tubes. Streck 10 mL BCTs are approximately 105 mm, which includes the length of the tube (≈ 100 mm) and stopper (≈ 5 mm). Streck 5 mL BCTs are approximately 80 mm, which includes the length of the tube (≈ 74 mm) and stopper (≈ 6 mm).
- Use an adapter that is accurate for the tube diameter and provides appropriate support for glass tubes to allow minimal movement. Large diameter adapters may allow too much space between the sides of the tube and the well and may cause breakage. A round bottom adapter is needed for Streck BCTs.
- The adapters and rotors often have different maximum speed recommendations. Do not exceed the adapter's max speed.

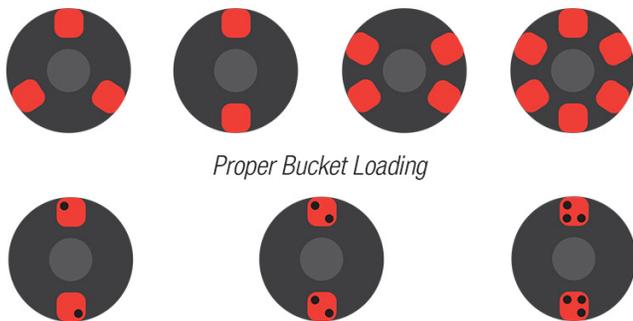


- Balance the tubes according to the measured mass (weight) of the filled tubes, not the observed draw volume in the tubes. Refer to the centrifuge manual for allowable weight differences and proper placement within the centrifuge to ensure balance. Imbalance leads to vibration/shaking which could cause breakage.

Streck products have varying regulatory statuses based on region of use. Please see the product pages at [streck.com](https://www.streck.com) for more information.

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- Centrifuge adapters should also be balanced by weight and positioned within the centrifuge accordingly.
- The weight of the maximum load is specified (weight class) on the buckets. Do not exceed this weight.
- Tube length and/or weight may limit the maximum number of tubes that can be spun per load. Do not exceed the adapter capacity for the specific tube dimensions.
- When working with a swing-bucket rotor that is not loaded to full capacity, position the tubes within the buckets in a pattern that results in symmetrical position for even stress and balance. Example below:



- Ensure the tube holders and adapters are clean. Small debris particles can cause damage or breakage to the tubes during the centrifugation process.
- Inspect tubes for cracks before use. Small imperfections can cause tubes to fracture at high speeds.
- Ensure the work surface is level. Do not use the centrifuge on uneven or slanted work surface.
- Ensure the centrifuge calibration, maintenance and periodic cleaning are up to date.